

Docket No. 396.43841X00
Serial No. 10/849,027
September 9, 2005

AMENDMENTS TO THE CLAIMS:

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

LISTING OF CLAIMS:

1. (Currently amended) A method of producing a polyamide by a polycondensation of a diamine component comprising 70 mol% or more of m-xylylenediamine and a dicarboxylic acid component comprising 60 to 95 mol% of a straight-chain α , ω -aliphatic dicarboxylic acid and 5 to 40 mol% of an aromatic dicarboxylic acid, the method comprising:
 - (1) a step of heating the dicarboxylic acid component to a temperature not lower than a melting point of the straight-chain α , ω -aliphatic dicarboxylic acid and not higher than 210°C, thereby obtaining a suspension of the aromatic dicarboxylic acid in a molten straight-chain α , ω -aliphatic dicarboxylic acid;
 - (2) a step of adding the diamine component comprising 70 mol% or more of m-xylylenediamine dropwise to the suspension while maintaining a reaction system at 220°C or lower;
 - (3) a step of heating the reaction system to a temperature exceeding 220°C and not higher than 270°C while continuing or discontinuing the addition of the diamine component, thereby allowing the reaction system to change from a suspension phase into a homogeneous molten phase;
 - (4) a step of further adding the diamine component dropwise to the reaction system at 270°C or lower while maintaining the homogeneous molten phase; and
 - (5) a step of maintaining the reaction system at 240 to 270°C after completing the addition of the diamine component, thereby increasing a degree of polymerization,

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with the proviso that 20 to 60% by weight of a total amount of the diamine component is added while the reaction system is in the suspension phase before changing into the homogeneous molten phase.

2. (Original) The method according to Claim 1, wherein the aromatic dicarboxylic acid is at least one of isophthalic acid and terephthalic acid.
3. (Original) The method according to Claim 1, wherein the straight-chain α , ω -aliphatic dicarboxylic acid is at least one dicarboxylic acid selected from the group consisting of succinic acid, glutaric acid, adipic acid, pimelic acid, suberic acid, azelaic acid, sebacic acid, undecanedioic acid and dodecanedioic acid.
4. (Original) The method according to Claim 1, wherein the straight-chain α , ω -aliphatic dicarboxylic acid is adipic acid.
5. (Original) The method according to Claim 1, wherein the diamine component is continuously or intermittently added in Step 2 over 10 to 150 min.
6. (Original) The method according to Claim 1, wherein the reaction system is continuously or intermittently heated over 0 to 30 min to allow the reaction system to change from the suspension phase into the homogeneous molten phase.
7. (Original) The method according to Claim 6, wherein the reaction system is heated at a temperature rise rate of 0.05 to 5°C/min.

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8. (Original) The method according to Claim 1, wherein 40 to 80% by weight of the total amount of the diamine component is continuously or intermittently added over 30 to 150 min in Step 4.
9. (Original) The method according to Claim 1, wherein Step 5 is performed in 20 to 120 min.
10. (New) The method according to Claim 1, wherein the diamine component added in Step 4 is the same diamine component as that added in Step 2.
11. (New) The method according to Claim 1, wherein the dicarboxylic acid component comprises 70 to 95 mol% of straight-chain α , ω -aliphatic dicarboxylic acid and 5 to 30 mol% of aromatic dicarboxylic acid.
12. (New) The method according to Claim 1, wherein 30 to 50% by weight of the total amount of the diamine component is added while the reaction system is in the suspension phase.
13. (New) The method according to Claim 1, wherein the Step 4 of further adding the diamine component is performed after the Step 3 of heating the reaction system thereby allowing the reaction system to change from a suspension phase into a homogeneous molten phase.

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14. (New) The method according to Claim 1, wherein said diamine component comprises 80 mol% or more of m-xylylenediamine, said diamine component comprising 80 mol% or more of m-xylylenediamine being added in Step 2 to the suspension.

15. (New) The method according to Claim 1, wherein said diamine component comprises 90 mol% or more of m-xylylenediamine, said diamine component comprising 90 mol% or more of m-xylylenediamine being added in Step 2 to the suspension.